

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-12 and 14 are pending in this case. Claims 1-12 are amended, Claim 13 is canceled without prejudice or disclaimer, and new Claim 14 is added by the present amendment. Amended Claims 1-12 and new Claim 14 are supported by the original claims and Figures 12A and 12B. No new matter is added.

In the outstanding Official Action, the abstract and disclosure are objected to for informalities. Claims 6 and 9-13 are objected to for failing to comply with 37 C.F.R. §1.75(c). Claims 1-5, 7, and 8 are objected to for containing informalities. Claims 1-5, 7, and 8 are rejected under 35 U.S.C. §112, second paragraph, as indefinite. Claims 1 and 2 are rejected under 35 U.S.C. §102(b) as anticipated by Mayer, Jr. (U.S. Patent No. 3,604,661, hereinafter "Mayer"). Claims 1-3 and 7 are rejected under 35 U.S.C. §102(b) as anticipated by Passler (German Patent No. 43 34 164). Claims 3-5, 7, and 8 are rejected under 35 U.S.C. §103(a) as obvious in light of Mayer.

With regard to the objections to the abstract and disclosure, the abstract and disclosure are amended to correct the informalities cited. No new matter is added. Accordingly, the objections to the abstract and disclosure are considered to have been overcome.

With regard to the objection to Claims 6 and 9-13, Claims 6 and 9-12 are amended such that none of Claims 6 and 9-12 depend from another multiple dependent claim. Claim 13 is canceled, making the present objection moot with respect to this claim. No new matter is added. Accordingly, the objection to Claims 6 and 9-13 is considered to have been overcome.

With regard to the objection to Claims 1-5, 7, and 8 as containing informalities, Claims 1-5, 7, and 8 have been amended to correct the cited informalities. Specifically, the

phrase “or at least of components thereof” has been deleted from both lines 5-6 and line 9 of Claim 1. No new matter is added. Accordingly, the objection to Claims 1-5, 7, and 8 is considered to have been overcome.

With regard to the rejection of Claims 1-5, 7, and 8 under 35 U.S.C. §112, second paragraph, as indefinite, Claims 1-5, 7, and 8 are amended to clarify the claimed subject matter. Specifically, the term “sound-reducing” has been deleted from Claim 1, and Claims 3 and 4 are amended to include the word “a” before the word “in.” Accordingly, it is respectfully submitted that Claims 1-5, 7, and 8 are in full compliance with all requirements under 35 U.S.C. §112, second paragraph.

With regard to the rejection of Claims 1 and 2 as anticipated by Meyer, the rejection is respectfully traversed.

Amended independent Claim 1 recites an aeroplane provided with a noise-reducing unit configured to reduce a noise level produced during a flight, comprising:

a blowing unit having a blowing element including at least one blowing nozzle for creating an air screen at a front side of a portion of the landing gear, said air screen configured to deflect air flow away from said portion of said landing gear to reduce said noise level.

Meyer describes a *boundary layer control means* including slots 17, 20, and 22 configured to discharge air along the surface of a wing or fuselage of an airplane to increase the speed of the air in the boundary layer of the wing or fuselage. The increased air speed lowers the air pressure in the boundary layer.¹

With regard to the Mayer reference, the outstanding Office Action stated on page 2, lines 11-13 that “Air directed downwardly from slots on the aircraft’s nose would create an air screen in advance of the landing gear, deflecting at least some of the slipstream away from the landing gear.” It is respectfully submitted that Mayer does not explicitly teach or suggest

¹See Meyer, column 1, lines 4-16, column 2, lines 42-48, column 5, lines 6-20, and Figures 1 and 2.

that the described apparatus creates an air screen in front of a portion the landing gear to reduce noise, and further it is respectfully submitted that the Mayer reference does not inherently teach or suggest this element either. “To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.’” *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).. See also MPEP §2112.

It is respectfully submitted that Meyer teaches that air is directed downwardly only from the slots on the side of the fuselage. The slots on the bottom of the fuselage direct air substantially horizontally to increase the air speed in the boundary layer. It is further respectfully submitted that the air directed downwardly from the slots on the side of the aircraft would not create an air screen in advance of the landing gear, as alleged in the outstanding Office Action. Indeed, the landing gear of the airplane described by Mayer is not even shown in any of the figures. Instead, Figures 1 and 2 of Mayer illustrate that the air is directed parallel to the surface of the aircraft, so as to lower the air pressure in the boundary layer. Thus, it is respectfully submitted that one with ordinary skill in the art would not recognize that the apparatus described by Mayer would form an air screen in front of a portion of the landing gear to reduce noise.

Accordingly, it is respectfully submitted that Mayer does not teach or suggest, explicitly or inherently, “a blowing unit having a blowing element including at least one blowing nozzle for creating an air screen at a front side of a portion of the landing gear, said air screen configured to deflect air flow away from said portion of said landing gear to reduce said noise level,” as recited in Claim 1.

Since the cited reference does not teach each and every element of Claim 1, Claim 1 is not anticipated by the cited reference and is patentable thereover.

With regard to the rejection of Claims 1-3 and 7 as anticipated by Passler, the rejection is respectfully traversed.

Passler describes an apparatus for blowing water off the runway in front of the tires of a plane that is landing, to prevent the tires from hydroplaning on puddles on the runway.² The apparatus blows air roughly horizontally at a level near the bottom of the tires of the aircraft to ensure that the tires do not go over any puddles.

With regard to the Passler reference, the outstanding Office Action states on page 3, lines 4-6 that "Blower unit 1 of Passler is considered to deflect at least some air away from the landing gear - in this case, the tires - of the aircraft due to the horizontal motion of air expelled forwardly and laterally from the unit." Again, it is respectfully submitted that the cited reference does not teach or suggest, explicitly or inherently, the subject matter recited in Claim 1.

It is respectfully submitted that one with ordinary skill in the art would not recognize that the apparatus described by Passler would form an air screen in front of a portion of the landing gear to reduce noise caused by the landing gear. It is respectfully submitted that the velocity of the air leaving this apparatus is substantially parallel to the horizontal, to ensure the water on the runway is blown away from the tires. Only a small downward component is included ensure the air flow reaches the runway. (The device cannot be placed even with the bottom of the tires, as the tires compress on landing.) To the extent the apparatus blows air down, this is wasted energy as the downward velocity will not blow water away from the tire path. Accordingly, it is respectfully submitted that one having ordinary skill in the art would recognize that the optimal design of the device described by Passler would have the air

²See Passler, Figures 1-4.

expelled nearly horizontally, with the apparatus located just above the ground. In fact, it is respectfully submitted that one with ordinary skill would recognize that the apparatus described in Passler significantly increases the noise level of the plane as it lands.

Accordingly, it is respectfully submitted that Passler does not teach or suggest, explicitly or inherently, "a blowing unit having a blowing element including at least one blowing nozzle for creating an air screen at a front side of a portion of the landing gear, said air screen configured to deflect air flow away from said portion of said landing gear to reduce said noise level," as recited in Claim 1.

Since the cited reference does not teach each and every element of Claim 1, Claim 1 is not anticipated by the cited reference and is patentable thereover.

Claims 2-11 are dependent from Claim 1, which applicants believe is patentable for the above stated reasons. Accordingly, Claims 2-11 are also believed to be patentable at least for the reasons discussed above with respect to Claim 1.

Claim 12 has been rewritten in independent form and essentially includes the subject matter noted above as to Claim 1. Accordingly, Claim 12 is believed to be patentable for the reasons noted above as to Claim 1.

New independent Claim 14 recites a landing gear for use with an aeroplane comprising:

a deflection element configured to create an air screen at a front side of a portion of the landing gear, said air screen configured to deflect air flow away from said portion of said landing gear to reduce said noise.

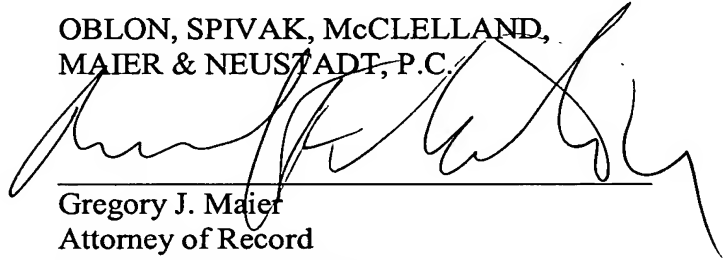
As stated above with respect to Claim 1, neither Mayer nor Passler disclose any means that function to create an air screen configured to deflect air flow away from a portion of landing gear to reduce landing gear noise. Accordingly, it is respectfully submitted that new Claim 14 is also patentable over Mayer and Passler.

Application No. 10/621,362
Reply to Office Action of April 21, 2004

Accordingly, the outstanding rejections are traversed and the pending claims are believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

A handwritten signature in black ink, appearing to read 'Gregory J. Maier', is written over a horizontal line.

Gregory J. Maier
Attorney of Record
Registration No. 25,599

Raymond F. Cardillo, Jr.
Registration No. 40,440

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

I:\ATTY\ET\240625US\240625US-AMD1.DOC